

ABSTRACT

5 A permanent magnet field small DC motor includes an arc-shaped rare earth magnet
of maximum thickness 1mm or less fabricated by compression molding from rare earth iron
based melt-spun flakes and a binder. The magnet is provided with a certain specific portion
at both ends in the circumferential direction, which has no back yoke when the magnet is
press-fit in a soft-magnetic frame. The arc-shaped rare earth magnet fabricated by
compression molding from a material containing more rare earth iron based melt-spun flakes
10 exhibits simultaneous increase of both a remanence as a function of magnetizing field and
a coercivity; and hence, exhibits a well-balanced demagnetization curve even in an
unsaturated magnetized state.